

### **Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

### **Listing of Claims:**

1. (Currently Amended) ~~System~~ A system for monitoring the movements, ~~if any~~, of construction work parts, the system comprising:

[[ - ]] a plurality of measurement taking stations ~~able~~ configured to sight targets ~~and, at least one of the measurement taking stations being configured to mount~~ capable of being mounted at least in part on and to move with ~~said~~ the construction work parts;

[[ - ]] a plurality of reference targets linked to at least one of the plurality of stations ~~station~~;

[[ - ]] a plurality of monitoring targets mounted on said construction work parts, at least one of said monitoring targets being associated with at least two stations;

[[ - ]] means for controlling ~~to control~~ each station ~~for measuring~~ to measure at successive instants ~~the~~ coordinates of the reference targets and coordinates of the monitoring targets ~~which~~ are associated ~~therewith~~ with ~~respect to~~ said station; and

[[ - ]] means ~~of~~ for processing the coordinates of the reference targets and of the monitoring targets ~~computed by said stations~~ at said successive instants ~~so as to deduce therefrom a~~ displacement, if any, of a one of the monitoring targets ~~target~~ between two of the measurement instants.

2. (Currently Amended) ~~Monitoring~~ The system according to Claim 1, further comprising:

[[ - ]] a monitoring centre ~~comprising~~ including said processing means; and

[[ - ]] means for transmitting from each station to said monitoring centre said coordinates of the monitoring targets and the coordinates of the reference targets measured by said stations at said successive instants.

3. (Currently Amended) ~~Monitoring~~ The system according to Claim 2, wherein said

processing means apply ~~comprise means for applying~~, for each ~~measurement~~ instant, a mathematical algorithm to ~~the set of~~ each of the measured coordinates of the reference targets

and each of the measured coordinates of the monitoring targets measured by ~~the set of the said stations~~ each station.

4. (Currently Amended) ~~Monitoring~~ The system according to Claim 1, wherein at least two monitoring targets are associated with each station, each monitoring target ~~said two targets~~ also being associated with another station.

5. (Currently Amended) ~~Monitoring~~ The system according to Claim 4, wherein each monitoring target associated with two stations includes ~~consists of~~ two target elements mounted on a construction work part ~~in such a way that their~~ such that a mutual distance between the two target elements is fixed, wherein one of the two stations ~~measuring~~ measures the coordinates of one of the ~~monitoring~~ target elements, and the other station ~~measuring~~ measures the coordinates of the other ~~monitoring~~ target element.

6. (Currently Amended) ~~Monitoring~~ The system according to Claim 3, wherein said mathematical algorithm is a method of least squares for calculating for each ~~measurement~~ instant ~~the an~~ absolute position in space of each of the ~~said~~ monitoring targets, and said processing means ~~furthermore comprise~~ further include means for comparing the absolute position of each monitoring target at the successive measurement instants.

7. (Currently Amended) ~~Monitoring~~ The system according to Claim 1, wherein said coordinates are polar coordinates.

8. (Currently Amended) ~~Monitoring~~ The system according to Claim 6, wherein said processing means ~~furthermore comprise~~ further include means for identifying at least one of the reference targets, ~~if any, or~~ and the monitoring targets, ~~if any,~~ corresponding to residuals obtained by the method of least squares greater than those of the other targets, and means for ignoring the measurements ~~involving~~ of the ~~said~~ identified targets.

9. (New) A system for monitoring movement of a structure, the system comprising:
- a plurality of measurement taking stations configured to sight targets, at least one of the measurement taking stations being configured to mount to the structure;
  - a plurality of reference targets, each reference target linked to at least one of the plurality of stations; and
  - a plurality of monitoring targets mounted on the structure, at least one of the monitoring targets arranged and configured to be sighted by at least a first and second measurement taking station;
- wherein each measurement taking station measures at successive instants coordinates of at least one of the plurality of reference targets and coordinates of at least one of the plurality of monitoring targets; and
- wherein the coordinates of the reference targets and the coordinates of the monitoring targets are processed at the successive instants to determine whether one of the monitoring targets has been displaced between two of the successive instants.
10. (New) The system according to Claim 1, further comprising:
- a monitoring centre including a processor for processing the coordinates of the monitoring targets and reference targets; and
  - a transmitter for transmitting from each station to the monitoring centre the coordinates of the monitoring targets and the coordinates of the reference targets measured by the stations at the successive instants.
11. (New) The system according to Claim 10, wherein the processor applies, for each measurement instant, a mathematical algorithm to each of the coordinates of the reference targets and each of the coordinates of the monitoring targets measured by each station.
12. (New) The system according to Claim 9, wherein at least two monitoring targets are associated with each station, each monitoring target also being associated with another station.
13. (New) The system according to Claim 12, wherein each monitoring target associated with two stations includes a first and a second target element mounted on a structure to be monitored such that a distance between the first and second target elements is fixed, wherein one

of the two stations measures the coordinates of the first target element and the other station measures the coordinates of the second target element.

14. (New) The system according to Claim 11, wherein the mathematical algorithm is a method of least squares for calculating for each measurement instant an absolute position in space of each of the monitoring targets, and the processor compares the absolute position of each monitoring target at each successive instant.

15. (New) The system according to Claim 9, wherein the coordinates are polar coordinates.

16. (New) The system according to Claim 14, wherein the processor identifies at least one of the reference targets and the monitoring targets corresponding to residuals obtained by the method of least squares greater than those of the other targets, and ignores the measurements of the identified targets.